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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/791,189      | 03/01/2004  | Charles John Call    | MESO-P002           | 3193             |

25268 7590 06/13/2006

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| EXAMINER |
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DOUGLAS, KATHERINE L

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| ART UNIT | PAPER NUMBER |
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1743

DATE MAILED: 06/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |   |                                    |  |
|------------------------------|---|------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/791,189    | <b>Applicant(s)</b><br>CALL ET AL. |  |
|                              | <b>Examiner</b><br>Katherine L. Douglas | <b>Art Unit</b><br>1743            |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 3-20-06.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3-7 and 21-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-7 and 21-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1,3-17,19-28 are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims <sup>3-7</sup>~~1, 4~~ and 21-24, drawn to an apparatus with a regenerative collection surface for analyzing airborne particles, classified in class 422, subclass 91.
  - II. Claims 8-16 and 25-28, drawn to an apparatus for analyzing airborne particles using fluorescence, classified in class 422, subclass 88.
  - III. Claims 17-20, drawn to an alarm device for airborne particulate, classified in class 422, subclass 105.

2. The inventions are distinct, each from the other because of the following reasons:

Inventions II and I are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because Invention I does not require a fluorescence detector. The subcombination has separate utility such as a detector using MALDI spectrometry.

Inventions I-II and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different designs, modes of operation, and effects (MPEP § 802.01 and § 806.06). In the instant case, the

different inventions have different modes of operation and effects. Invention I-II are not alarm systems, they are merely detection devices.

3. Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Michael King on 3/16/06 a provisional election was made without traverse to prosecute the invention of an apparatus with a regenerative collection surface for analyzing airborne particles, claims 1-7 and 21-24. Affirmation of this election must be made by applicant in replying to this Office action. Claims 8-20 and 25-28 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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7. **Claim 1** is rejected under 35 U.S.C. 102(b) as being anticipated by Goldstein (USPN 5,063,164). Goldstein discloses a system that measures the changes to a substrate containing a "self-regenerating chemical sensor reagent" [abstract] as airborne toxins interact with the substrate. An optical sensor measures these changes and the presence of the particles being measured can be quantitated based on these measurements [column 2, lines 33-39].

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. **Claim 3** is rejected under 35 U.S.C. 103(a) as being unpatentable over Goldstein in view of Marsoner et al. (5,039,490). Goldstein does not specifically disclose how the detector communicates its readings. However, Marsoner discloses a sensor for determining the concentration of substances that is opto-electric. These signals are transmitted to an electronic display using electronic leads [column 2, lines 10-30]. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the system of Goldstein by using electric wiring to display the signals of the detector for the purpose of being able to connect the detector to a display device.

12. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over Goldstein in view of Tsai et al. (USPN 5,553,795). Goldstein does not specifically disclose how the airborne particles land on the collection surface. However, Tsai discloses an inertial impactor that directs airborne particulate to a surface. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the system of Goldstein by using the inertial impactor of Tsai et al. for the purposes of "reducing the loss of particles due to rebounding or blowing off particles from the impaction plate so as to increase particle collection efficiency and capacity, permit a quick accumulation of the particles . . . and increase collection efficiency accordingly" [abstract].

13. **Claims 5-7, 21, and 23-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldstein in view of Selinfreund et al. (USPN 6,707,539). Goldstein

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does not disclose a device that uses fluorescence, however, Selinfreund et al. disclose a device that irradiates samples with light of a predetermined wavelength and detects the wavelength of the light emitted from the sample. Each kind of particle that is light-emissive as a result of irradiation with light has a specific "fingerprint emission profile" that is unique, and can be measured to allow the particulate in question to be analyzed and quantitated. Specifically, fluorescence is often measured. [column 6, lines 29-54] Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use fluorescence measurements for the purpose of examining the particulate on the collection surface.

14. **Claim 22** is rejected under 35 U.S.C. 103(a) as being unpatentable over Goldstein in view of Selinfreund et al. as applied to claim 21 above, and further in view of Tsai. Goldstein in view of Selinfreund et al. does not specifically teach the use of an inertial impactor. The teachings of Tsai are above. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the system of Goldstein by using the inertial impactor of Tsai et al. for the purposes of "reducing the loss of particles due to rebounding or blowing off particles from the impaction plate so as to increase particle collection efficiency and capacity, permit a quick accumulation of the particles . . . and increase collection efficiency accordingly" [abstract].

### ***Conclusion***


15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Melendez et al. (USPN 6,024,923) discloses a biochemical sensor that uses fluorescence.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine L. Douglas whose telephone number is 571-272-1207. The examiner can normally be reached on Monday - Friday, 8:00 am - 4:30 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

kld

  
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